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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/545,554	04/07/2000	Richard B. Hook	13DV13349	1804

29399 7590 02/21/2002

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EXAMINER

KIM, TAE JUN

ART UNIT	PAPER NUMBER
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3746

DATE MAILED: 02/21/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/545,554

Applicant(s)

HOOK

Examiner

Ted Kim

Art Unit

3746

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 October 2001.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 13.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

RCE

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 10/31/01 has been entered.

Drawings

2. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the water injection nozzle connected to the innermost swirl cup 72, 74 must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 1-4, 6, 8-11, 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schilling et al (5,630,319) in view of either Horner et al (5,274,995) or

Borkowicz et al (5,259,184). Horner teaches a combustor having 3 domes 61, 63, 65 and incorporating dual fuel premixers in each dome, i.e. of the type utilized by Joshi et al (see col. 3, 1st few lines) and which operate fuel lean (see col. 6, lines 4+ of Joshi et al 5,351,477). Horner does not teach water injection into the premixers. Horner et al and Borkowicz each teach that it is old and well known in the art to employ water/steam injection into the premixer of a gas turbine combustor in order to lower NOx emissions and/or CO emissions. It would have been obvious to one of ordinary skill in the art to employ water/steam injection with the premixers of Schilling et al, in order to facilitate low emissions.

5. Claims 5, 12-14, 18-20 rejected under 35 U.S.C. 103(a) as being unpatentable over Schilling et al (5,630,319) in view of either Horner et al (5,274,995) or Borkowicz et al (5,259,184), as applied above and further in view of either Talabisco et al (5,357,741) or Maslak (4,928,478). The prior art teach various aspects of applicant's claimed invention but do not explicitly teach the water delivery system operable in first and second mode relative to a predetermined value. Talabisco et al teach that it is old and well known in the art to control the steam/water based on the load, among other variables (see abstract). Maslak teaches that it is old and well known in the art to control water/steam injection into the combustor with several different modes (see e.g. Fig. 4). It would have been obvious to one of ordinary skill in the art to control the steam/water injection by using a first and second mode with a predetermined value, as being a notoriously old and well known method utilized in the art. As for the that set point being greater than 90 percent

of the rated power capability, that is within the ordinary skill in the art, as an obvious matter of finding the workable ranges in the art.

Response to Arguments

6. Applicant's arguments filed 10/31/01 have been fully considered but they are not persuasive with regard to the 103 rejections.

In response to applicant's arguments concerning the drawings, 37 CFR 1.83(a) provides for the drawings must show every feature of the invention specified in the claims. Therefore, the water injection nozzle connected to the innermost swirl cup 72, 74 must be shown or the feature(s) canceled from the claim(s). As this feature is one at the crux of the invention, the requirement is being maintained.

Applicant's arguments with respect to the claims boil down to arguments concerning hindsight and motivation.

In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971). In this case, the teachings are clear, to employ water/steam injection into the premixer of a gas turbine combustor in order to lower NOx emissions and/or CO emissions. Consequently, it is

noted that the combination of references applied fully cover applicant's claimed invention.

Applicant's arguments, particularly on page 4, 2nd paragraph are predicated on the fact the rejection is not a 102 rejection, as applicant recites the entirety of claim 1 and argues that no reference teaches the limitations of claim 1. However, it is noted that the rejections were not made under 102 but under 103 and that in combination, the references fairly teach one of ordinary skill in the art the claimed invention. It is also noted that applicant does not provide any reasoning as to why these references would not be combined by one of ordinary skill in the art beyond a general allegation of hindsight, lack of motivation, etc. Applicant is also reminded that the teachings of a reference are not limited to the preferred embodiment(s), but are applicable for what they fairly teach one of ordinary skill in the art, *In re Boe*, 148 USPQ 507 (CCPA 1966).

7. All claims are drawn to the same invention claimed in the application prior to the entry of the submission under 37 CFR 1.114 and could have been finally rejected on the grounds and art of record in the next Office action if they had been entered in the application prior to entry under 37 CFR 1.114. Accordingly, **THIS ACTION IS MADE FINAL** even though it is a first action after the filing of a request for continued examination and the submission under 37 CFR 1.114. See MPEP § 706.07(b). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Contact Information

Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Ted Kim whose telephone number is 703-308-2631. The Examiner can be reached on regular business hours before 5:00 pm, Monday to Thursday and every other Friday.

The fax numbers for the organization where this application is assigned are 703-872-9302 for Regular faxes and 703-872-9303 for After Final faxes.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Thorpe, can be reached on 703-308-0102.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist of Technology Center 3700, whose telephone number is 703-308-0861.

General inquiries can also be directed to Technology Center Customer Service Office at 703-306-5648 or the Patents Assistance Center whose telephone number is 800-

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786-9199. Furthermore, a variety of online resources are available at

<http://www.uspto.gov/main/patents.htm>



Ted Kim

Primary Examiner

February 20, 2002

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